Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

stratified débris of all formations adjacent northwards, with some stratification of the surface of an irregular kind. A peculiar feature of the range is the presence of large holes and sinks, some of which are full of water. From these holes the range is called the Kettle Moraine. Its distribution is alike regardless of the geological and topographical features of the country, excepting in its parallelism to the southern border of the Great Lakes. Professor Chamberlin regards it as a terminal moraine which marks a period in the history of the glaciers which are supposed to have once filled the depressions now occupied by the Great Lakes.

MIOCENE VERTEBRATA OF OREGON.—An examination of a collection of vertebrate fossils from the John Day river, Oregon, recently made by Prof. Cope, yielded the following species: Artiodactyla—*Hypertragulus calcaratus* Cope, *Leptomeryx evansi* Leidy, *Eucrotaphus superbus* Leidy, *E. occidentalis* Marsh, *Merycochœrus leidyanus* Bettany, *Hyopotamus guyotianus* sp. nov., *Thinohyus socialis* Marsh, *T. lentus* Marsh, *Elotherium imperator* Leidy. Perissodactyla—*Rhinocerus pacificus* Leidy, *Anchitherium equiceps* sp, nov., *A. brachylophum* sp. nov., *A. longicristis* sp. nov., *Dæodon shoshonensis* gen. et sp. nov. (allied to *Chalicotherium*). Carnivora—*Canis gregarius* Cope, *C. lippincottianus* Cope, *C. cuspigerus* sp. nov., *C. geismarianus* sp. nov., *Temnocyon altigenis* gen. et sp. nov., *Machærodus strigidens* sp. nov, *M. brachyops* sp. nov. Rodentia—*Meniscomys hippodus* gen. et. sp. nov., *M. multiplicatus* sp. nov., *Pleurolcus sulcifrons* gen. et sp. nov., *Entoptychus cavifrons* gen. et sp. nov., *E. planifrons* sp. nov., *E. crassiramis* sp. nov., *Steneofiber* sp., *Steneofiber gradatus* sp. nov., *Palæolagus haydeni* Leidy.—*Proceedings of the Amer. Philosophical Society.*

GEOGRAPHY AND TRAVELS.[1]

THE AMAZON.—In the September number of the NATURALIST mention was made of the survey of the Amazon and Madeira rivers, undertaken by the U. S. corvette *Enterprise*, Commander Selfridge. This vessel arrived at New York on the 25th of September last, and we learn from the New York *Herald* of the successful accomplishment of her mission. At Serpa, near the mouth of the Madeira they found the Amazon a mile in width and sixty feet deep. The Madeira is here about two miles wide, and its principal channel has a depth of from ninety to sixty feet, according to the season of the year. From near its mouth to the falls its banks are high and well marked. The steamer entered the Madeira on the 17th of June, and advanced without difficulty at the rate of twenty-five miles a day, stopping at night, until the 21st, when near the island of Araras the pilots reported rocks and shoals. Although careful investigation proved that no rocks were there, and five fathoms of water was found, it was not deemed advisable for the ship to cross, owing to the reports of the pilots and natives of the great and sudden changes in the rise and fall of the stream. The survey was, however, continued by the steam launch to San Antonio, a distance of about 325 miles, with the exception of the last thirty miles, which was, owing to an accident to the launch, made by Capt. Selfridge and Lieut. Perkins on board a Brazilian merchant steamer. Leaving the *Enterprise* on the 25th of June, the surveying party were again safe on board on the 20th of July. The results of their observations show that a navigable channel for ships drawing up to sixteen feet of water exists from the mouth of the Madeira to San Antonio, a distance of 500 miles. This channel is passable during nine months of the year, but during the time of low water, namely, August, September and October, the river is so low that in many places not more than six or eight feet can be carried. The adjacent territory is very thinly populated. Large quantities of rubber are collected and shipped along the river, and also copaiba, sarsaparilla, copal and chouta, a black odoriferous gum used as a cement.

---

[1] Edited by ELLIS H. YARNALL, Philadelphia.

ARCTIC EXPLORATION.—The schooner *Florence*, Capt. Tyson, which was fitted out and sent by Capt. Howgate to Cumberland Gulf to procure skins, dogs, sledges and other material for the use of his expedition, has returned home, and from a dispatch by Capt. Tyson to the New York *Herald*, we learn that he sailed from New London on the 2d of August, 1877, and reached the Gulf after a tedious voyage of forty-one days. Here they remained in Niantilic harbor, latitude 65° 10′ north, longitude 67° 30′ west, until October 1st, when they removed to Annatook harbor, at the head of the Gulf. There they passed the winter and spring. On the 19th of July they sailed for Disco island, taking with them fifteen Esquimaux, men, women and children, twenty-eight dogs, a fair quantity of skin clothing and a great many skins. Arriving at Disco on July 31st, they remained until August 22d, when no intelligence of the expedition being received, they returned, after a difficult passage through the ice off Cape Mercy, to the Gulf. After discharging the Esquimaux they started on their voyage home on the 2d of September. Messrs. Kumlin and Sherman, the scientific members of the party, were very successful in the performance of their duties. The former has secured a large number of specimens, and the latter, aided by two of the crew, took hourly observations during the winter. The season has been a bad one. Melville Bay has been entirely blockaded by the ice, no whalers having been able to penetrate it, and the Danish ships have been unable to reach the upper settlements.

RESULTS OF THE RECENT BRITISH ARCTIC EXPEDITION.—Sir George Nares has, in his "Narrative of a Voyage to the Polar Sea," recently published, given more fully his reasons why he believes it is impracticable to reach the Pole by the Smith Sound route. The heavy polar pack, formed of ice from 80 to 100 feet in thickness, is rendered almost impassable by dense hummocks from 20 to 40 feet in height, or floes of most uneven surface covered with deep snow. North from Cape Joseph Henry, in latitude 83°, no land exists as far as the 84th degree, and he believes there is none for a distance of 200 miles.

Whether or not land exists within the three hundred and sixty miles which stretch from this limit to the northern axis of the globe is, so far as sledge traveling is concerned, immaterial. Sixty miles of such pack, Capt. Nares holds to be an insuperable objection to traveling in that direction with our present appliances.

The Polar sea extends along the northern coast of Grinnell land westward for a distance of at least two hundred miles, when the coast trends to the south-west, and no land further north is accessible by a sledge expedition in that direction. Entrance to all bays or harbors westward of Cape Joseph Henry is also barred by the Polar ice-wall. A similar barrier of ice exists along the North Greenland coast, so that no ship can hope to find protection on either of these shores.

Capt. Nares also regards the similarity in the character of the ice, and the formation of the coast of Banks land and Prince Patrick's island, to that of Grinnell land as evidence that the Polar sea extends to their shores, but the reverse conditions existing on the northern shore of the Parry islands indicates the extension of Grinnell land more or less continuously for the whole distance to Ireland's Eye, protecting the Parry islands from the Polar ice. It is, however, probable that Jones' sound affords the most direct route from Baffin's bay in a north-westerly direction to the Polar sea, separating Grinnell land from the land which protects the Parry islands.

From the "Abstract of Tidal Observations," by Dr. Samuel Haughton, we learn that the new tidal wave observed on board both the *Alert* and *Discovery* is *specifically* distinct from the Baffin's bay tide, and from the tide that enters the Arctic ocean through Behring's straits; and it is, without question, a tide that has passed from the Atlantic ocean round Greenland northwards and then westwards. Greenland probably ends not far north of latitude 82° or 83°.

GEOGRAPHICAL NEWS.—The deep sea soundings taken on board the U. S. Coast Survey steamer *Blake* during her voyage in the Gulf of Mexico, mentioned in our September number, were made about the south-east of the Gulf, about the Florida bank, west of the peninsula of the same name, about the Yucatan bank, and north-west of that peninsula. and in the intervening portion of sea between the above-mentioned places and the western end of the island of Cuba. Prof. Alexander Agassiz who conducted these investigations obtained surprisingly rich zoological results. The deepest sounding was taken between the Tortugas and the north-east cape of Yucatan (Cape Catoche) and was 1,920 fathoms; the next deepest being 1,568, north of the same. All depths of water of about 600 fathoms and upwards gave a uniform temperature of 39.5° Fahrenheit.

A correspondent of the New York *Tribune* gives an account of the results of a recent careful survey of Newfoundland under the superintendence of a Geological Commission. The area of the island is now found to be 42,000 square miles. It is 317 miles in length and 316 miles in breadth. It is, therefore, the tenth largest island in the world, and contains 10,000 square miles more than Ireland. Nor is there to be found an equal area with such an extent of coast line as Newfoundland, which, according to the Surveyor's report, cannot be less than 2,000 miles in length.

Prof. F. V. Hayden, in charge of the U. S. Geological Survey of the Territories, has recently been elected foreign member of the Royal Academy of Sciences, Letters and Arts, of Palermo, Sicily.

The English Palestine Exploration Fund has successfully accomplished the survey they began, in 1872, of all Palestine west of the Jordan. The scientific results of this survey are to be made public in a series of memoirs. The map is to be on the scale of one inch to a mile. The portion east of the river was assigned to the American Expedition, and is not yet completed.

MICROSCOPY.[1]

NATIONAL MICROSCOPICAL CONGRESS (*Continued*).—Dr. R. H. Ward spoke at some length in regard to "Recent Progress in Microscopic Ruling," referring chiefly to the recent work of Mr. Charles Fasoldt, of Albany, and of Professor Wm. A. Rogers, of Cambridge. Mr. Fasoldt's experiments in ruling commenced during the middle of last winter, and must be regarded as remarkable considering the fact that he was entirely unfamiliar with the microscope and its use, and knew nothing of what had been done or could be done in microscopic ruling. Being a manufacturer of chronometers, he possessed the advantage of great skill in small mechanical operations and some experience in handling gems. He first, at the casual suggestion of a friend, undertook to make circular rulings, described with a common lathe and spaced with the slide-rest; and in this manner produced fair concentric circles as close as $\frac{1}{5000}$ of an inch. Parallel straight lines of equal closeness, but not of equal excellence, were then made on the same lathe, both the spacing and the ruling being accomplished by the motions of the slide-rest. Dissatisfied with this result, a screw machine was extemporized, and much closer lines of much better quality were produced. Some of the bands ruled with this little screw were better than many of the commercial

---

[1] This department is edited by Dr. R. H. WARD, Troy, N. Y.